REMARKS

Claims 2, 3, 5, 7-29 are pending in this application, of which claims 2-3 have been amended and claims 27-29 are newly-added. Claims 17-26 have been withdrawn from consideration.

Claims 2, 3, 5, 7-13 stand rejected under 35 U.S.C. §102(e) as anticipated of **Kato et al** (previously applied).

Applicants respectfully traverse this rejection.

Kato et al was discussed in Applicants' previous response of July 24, 2002, in which it was argued that, in view of the disclosure in column 13, lines 28-39 for the third embodiment, because **Kato et al** discloses that the GOP may be set on the pre-set time, **Kato et al** fails to disclose that a GOP boundary position is decided based on a decision by an intra-frame coding mode decision means, as recited in claim 3 of the instant application.

The Examiner has disagreed with this argument and has cited column 6, lines 52-57 and Figs. 3 and 11 for teaching this feature.

Applicants respectfully disagree with the Examiner's reasoning. Column 6, lines 52-57 relate to the first embodiment shown in Figs. 1-8. However, column 13, line 27 to column 14, line 53 disclose a third embodiment involving an example of GOP in the MPEG used as a pre-set time and distinguishes it from the previous embodiments, in which "the amount of allocated bits per pre-set time, that is the mean encoding rate per pre-set time, as produced on the frame basis with the frame being set on the above pre-set time." There is no mention of GOP in the first two embodiments, to which the Examiner has referred by citing column 6, lines 52-57. Thus, the

Examiner's discussion regarding the predictive judgments made in items 13, 14 of Fig. 3 are irrelevant to any discussion of GOP.

Furthermore, it should be noted that **Kato et al.** discloses means for deciding a coding mode of a block of a video picture, in contrast to the present invention, which is directed to deciding a coding mode of an entire video picture.

For example, **Kato et al.** discloses whether or not each block of the video picture is coded intra-frame, but fails to disclose whether or not a coding of the entire video picture is coded intra-frame. The intra-frame coding mode for a block unit is quite different from the intra-frame code mode for an entire video picture unit. For example, in the former case, an intra-frame coding mode is selected for a block unit, however, in the latter case, all blocks are designated for an intra-frame coding mode.

For example, column 6, lines 52 to 57 of **Kato et al.** discloses "intra-frame/forward/backward/bi-directional prediction in terms of block as a unit...". This means that the coding mode for each block is decided.

According to the forward, backward and bi-directional mode prediction performed in **Kato et al.**, the prediction mode is adaptively selected in a block unit (column 4, lines 33 to 35). It is clear that this does not decide a distance between P frames.

Therefore, the conclusion of the Examiner at page 4, lines 5 to 10 in the Office Action is not well-taken.

Marks 11 and 12 in Fig. 3 show motion vector detecting means and a frame memory, respectively, as disclosed in column 4, lines 33 to 35. However, marks 11 and 12 do not show a

means for deciding a GOP boundary position. **Kato et al.** fails to disclose a control means whereby a GOP becomes variable, as in the present invention.

Thus, the 35 USC §102(e) rejection should be withdrawn.

Claims 14-16 stand rejected under 35 U.S.C. §103(a) as unpatentable over **Kato et al** in view of **Igarashi et al**.

Applicants respectfully traverse this rejection.

Again, the Examiner has cited Fig. 32 of **Igarashi et al** for teaching that the small blocks (Fig. 10A-10B) are used to judge an edge region inside the video picture based on the dispersion value of pixel information of edges in a picture due to motion is detected by "var 1".

Applicants respectfully disagree. The terms "var 1" and "var 2" in Fig. 32 of **Igarashi et al.** represent variables, not variances. Fig. 32 and column 29, lines 1 to 47 of **Igarashi et al.** illustrate an operation for detecting a comb deformation of edges in a picture due to motion, as shown in Fig. 2, and mode changing (a first structure mode, a second structure mode) thereby. An object of the calculation of var 1 is to detect a portion (a comb deformation of edges in a picture due to motion) showing a characteristic as shown in Fig. 2 of **Igarashi et al.**, but the object thereof is not to detect an edge.

Thus, **Igarashi et al's** teaching of detecting comb deformation of edges in a picture due to motion does not teach or suggest "dividing a target video picture into small blocks so as to judge an edge region inside the video picture based on the dispersion value of pixel information on the small block," as recited in claims 14-15 of the instant application.

Furthermore, contrary to the Examiner's assertions, column 11, lines 41-55 of **Kato et al** do not relate to GOP, and column 13, lines 52-65 **Kato et al** disclose no more than that pattern complexity is checked from the "amount of generated codes of the I-picture", and there is no disclosure of "predicting coding complexity in each system based on the feature of the video picture inside the GOP so as to control a coding quantity at the time of coding in consideration of the complexity", as recited in claim 16 of the instant application.

Thus, the 35 USC §103(a) rejection should be reconsidered and withdrawn.

Claims 2-3 have been amended, and claims 27-29 have been added, to clarify that the motion compensatory prediction coding is based on features between timewise adjacent frames with respect to the input video picture, which is not taught by any of the cited references.

In view of the aforementioned amendments and accompanying remarks, claims 2, 3, 5, 7-16 and 27, 29, as amended, are in condition for further examination.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made**."

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Version with markings to show changes made
RCE
Petition for Extension of Time

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VERSION WITH MARKINGS TO SHOW CHANGES MADE 09/515,896

IN THE CLAIMS:

Please amend claims 2-3 as follows:

2. (Amended) A video coding apparatus for coding a video picture by the use of motion compensatory prediction of each of video pictures with respect to sequentially input video signals, the video coding apparatus comprising:

one-way coding (P) frame interval decision means for deciding a P frame interval for carrying out motion compensatory prediction coding based on the features [of] the input video pictures, the P frame interval inside the GOP being decided based on the decision by the P frame interval decision means.

3. (Twice Amended) A video coding apparatus for coding a video picture by the use of motion compensatory prediction of each of video pictures with respect to sequentially input video signals, the video coding apparatus comprising:

inter-frame variance calculation means for calculating a variance between timewise adjacent [input video signals] frames with respect to the input video signals;

intra-frame coding mode decision means for deciding an intra-frame coding mode based on the variance without using any motion compensatory prediction; and

one-way coding (P) frame interval decision means for deciding a P frame interval for carrying out motion compensatory prediction coding based on the features [of] between time

wise adjacent frames with respect to the input video pictures,

a GOP boundary position being decided based on the decision by the intra-frame coding mode decision means, and the P frame interval inside a GOP being decided based on the decision by the P frame interval decision means.